Electronic Version
Stylesheet Version v1.1.1

AUTHENTICATION SYSTEM, DATA DEVICE, AND METHODS FOR USING THE SAME

Abstract

An authentication system may comprise: a first light source, a second light source, and at least three optically filtered light sensing devices for detecting analog emission intensity in a spectral sensitivity range, wherein each light sensing device is in operable communication with the first light source and/or the second light source. The first light source can have a first light source spectral distribution and can be capable of providing sufficient excitation to produce a photoluminescent emission from a medium comprising a luminescent tag and a color. The second light source can have a visible multi-wavelength spectral distribution and can be capable of providing sufficient visible multi-wavelength illumination of the medium to generate a second analog response, wherein the second analog response is different from the photoluminescent emission. Each light sensing device can have a different device spectral sensitivity range which includes at least a portion of the visible multi-wavelength spectral distribution, with the

device spectral sensitivity range of at least one of the light sensing devices including at least a portion of a desired photoluminescent emission wavelength range.